CLAIMS

1.   A method of controlling access to an electronic document, comprising:

receiving at a document management system a request from a first user for an electronic document at a first user location, a rendition of the electronic document being stored in a document repository in the document management system;

authenticating the first user at the document management system, using a set of access policies for the electronic document, to verify that the first user is authorized to obtain the electronic document; and

if the first user is authorized to obtain the electronic document,

passing an encrypted rendition of the electronic document to the first user;

receiving at the document management system a request from a second user for access to the encrypted rendition;

authenticating the second user at the document management system, using the set of access policies, to establish which operations the second user is allowed to perform on the encrypted rendition;

creating, at the document management system, a voucher, the voucher including an electronic key operable to decrypt the encrypted rendition of the electronic document and the set of access policies for the electronic document; and

passing the electronic voucher to a second user location.

2.   The method of claim 1, further comprising:

creating, at the document management system, the encrypted rendition using the rendition that is stored in the document repository.

3.   The method of claim 1, wherein creating a voucher comprises:

obtaining the set of access policies for the second user from an access control list that is associated with the electronic document; and

including the obtained set of access policies in the electronic voucher.

4.   The method of claim 1, wherein the set of access policies for the electronic document identify one or more of the following operations:

adding content to the rendition, adding comments to the rendition, applying a digital signature to the rendition, saving the rendition, printing the rendition, importing form data into the rendition, exporting form data from the rendition, and transmitting the rendition to another user.

5. The method of claim 1, further comprising:

including a list of application rights in the electronic voucher prior to passing the electronic voucher to the second user location.

6. The method of claim 1, further comprising:

including expiration information in the electronic voucher prior to passing the electronic voucher to the second user location.

7. The method of claim 6, wherein the expiration information includes one or more of: a predetermined number of access operations before the voucher expires, a particular time period before the voucher expires, and a particular time when the voucher expires.

8. The method of claim 2, wherein:

providing the encrypted rendition includes providing the encrypted rendition from a location other than the document repository.

9. The method of claim 8, wherein:

providing the encrypted rendition includes providing the encrypted rendition from the first user location.

10. The method of claim 1, wherein the rendition is a Portable Document Format document.

11. The method of claim 1, further comprising:

recording information relating to the request in an audit trail for the electronic

document.

12.   The method of claim 1, wherein the first user and the second user are the same individual.

13.   The method of claim 1, wherein the first user location and the second user location are identical.

14.   A method of accessing an electronic document, comprising:

        requesting, from a document management system, access at a user location to an electronic document, one or more renditions of the electronic document being stored in a document repository in the document management system;

        receiving at the user location an electronic voucher for the electronic document, the electronic voucher being issued by the document management system and including an electronic key operable to decrypt an encrypted rendition of the electronic document; and

        using the electronic key of the electronic voucher at the user location to decrypt the encrypted rendition of the electronic document.

15.   The method of claim 14, further comprising:

        determining whether the encrypted rendition of the electronic document is available at the user location;

        wherein, if it is determined that the encrypted rendition is available at the user location, requesting access includes:

        extracting from the encrypted rendition a reference to the document repository where one or more renditions of the electronic document are stored; and

        requesting access to the rendition from the document repository identified by the extracted reference.

16.   The method of claim 15, wherein:

        the encrypted rendition includes a document identifier and the reference to the document repository includes a path for accessing the document repository over a computer

network; and

requesting access includes:

retrieving the document identifier and the path from the encrypted rendition; and

sending an access request to the document repository specified by the retrieved path,

5   the access request including the document identifier.

17. The method of claim 14, wherein:

the electronic voucher further includes a set of access policies for the electronic

document.

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18.   The method of claim 17, wherein the set of access policies include information

indicating that a user at the user location is authorized to perform one or more of the

following operations:

adding content to the electronic document, adding comments to the electronic

15   document, applying a digital signature to the electronic document, saving the electronic

document, printing the electronic document, importing form data into the electronic

document, exporting form data from the electronic document, and transmitting the electronic

document to another user.

20   19.   The method of claim 17, further comprising:

verifying, at the user location, that one or more requested operations are allowed by

the set of access policies for the electronic document.

20.   The method of claim 17, wherein:

25   the set of access policies is a set of access policies that resides in the document

repository and specifies access rights to the electronic document.

21.   The method of claim 14, wherein:

the electronic voucher further includes a set of application rights, the application

30   rights being operable to enable one or more disabled operations in an electronic document

software application at the user location.

22. The method of claim 14, wherein the rendition is a Portable Document Format document.

5   23. The method of claim 14, further comprising:

storing the received voucher at the user location.

24. The method of claim 14, wherein receiving an electronic voucher comprises:

determining whether an electronic voucher is stored locally at the user location; and

10   if the electronic voucher is stored locally, retrieving the electronic voucher from the local storage;

if the electronic voucher is not stored locally, requesting an electronic voucher from the document management system.

15   25. The method of claim 14, further comprising:

receiving an encrypted rendition of the electronic document.

26. The method of claim 14, wherein:

the voucher includes expiration information including one or more of: a

20   predetermined number of access operations before the voucher expires, a particular time period before the voucher expires, and a particular time when the voucher expires.

27. A method for controlling access to an electronic document, comprising:

receiving at a document management system a request from a user for access to an

25   electronic document at a user location, a rendition of the electronic document being stored in a document repository in the document management system;

authenticating the user at the document management system, to verify that the user is authorized to access the electronic document; and

if the user is authorized to access the electronic document,

30   creating, at the document management system, an encrypted rendition using the rendition that is stored in the document repository;

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creating, at the document management system, a voucher including an electronic key operable to decrypt an encrypted rendition of the electronic document; and

passing the electronic voucher to the user location.

5   28.   A computer program product, tangibly stored on a computer-readable medium, for controlling access to an electronic document, comprising instructions operable to cause a programmable processor to:

receive at a document management system a request from a first user for an electronic document at a first user location, a rendition of the electronic document being stored in a

10   document repository in the document management system;

authenticate the first user at the document management system, using a set of access policies for the electronic document, to verify that the first user is authorized to obtain the electronic document; and

if the first user is authorized to obtain the electronic document,

15   pass an encrypted rendition of the electronic document to the first user;

receive at the document management system a request from a second user for access to the encrypted rendition;

authenticate the second user at the document management system, using the set of access policies, to establish which operations the second user is allowed to

20   perform on the encrypted rendition;

create, at the document management system, a voucher, the voucher including an electronic key operable to decrypt the encrypted rendition of the electronic document and the set of access policies for the electronic document; and

pass the electronic voucher to a second user location.

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29.   The computer program product of claim 28, further comprising instructions to:

create, at the document management system, the encrypted rendition using the rendition that is stored in the document repository.

30   30.   The computer program product of claim 29, wherein the instructions to create a voucher comprise instructions to:

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obtain the set of access policies for the second user from an access control list that is associated with the electronic document; and

include the obtained set of access policies in the electronic voucher.

5   31.   The computer program product of claim 29, wherein the set of access policies for the electronic document identify one or more of the following operations:

adding content to the rendition, adding comments to the rendition, applying a digital signature to the rendition, saving the rendition, printing the rendition, importing form data into the rendition, exporting form data from the rendition, and transmitting the rendition to

10   another user.

32.   The computer program product of claim 29, further comprising instructions to:

include a list of application rights in the electronic voucher prior to passing the electronic voucher to the second user location.

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33.   The computer program product of claim 29, further comprising instructions to:

include expiration information in the electronic voucher prior to passing the electronic voucher to the user location.

20   34.   The computer program product of claim 33, wherein the expiration information includes one or more of: a predetermined number of access operations before the voucher expires, a particular time period before the voucher expires, and a particular time when the voucher expires.

25   35.   The computer program product of claim 28, wherein:

the instructions to provide the encrypted rendition include instructions to provide the encrypted rendition from a location other than the document repository.

36.   The computer program product of claim 35, wherein:

30   the instructions to provide the encrypted rendition include instructions to provide the

encrypted rendition from the first user location.

37.   The computer program product of claim 28, wherein the rendition is a Portable Document Format document.

38.   The computer program product of claim 28, further comprising instructions to:
record information relating to the request in an audit trail for the electronic document.

39.   The computer program product of claim 28, wherein the first user and the second user are the same individual.

40.   The computer program product of claim 28, wherein the first user location and the second user location are identical.

41.   A computer program product, tangibly stored on a computer-readable medium, for accessing an electronic document, comprising instructions operable to cause a programmable processor to:
request, from a document management system, access at a user location to an electronic document, one or more renditions of the electronic document being stored in a document repository in the document management system;
receive at the user location an electronic voucher for the electronic document, the electronic voucher being issued by the document management system and including an electronic key operable to decrypt an encrypted rendition of the electronic document; and
use the electronic key of the electronic voucher at the user location to decrypt the encrypted rendition of the electronic document.

42.   The computer program product of claim 41, further comprising instructions to:
determine whether the encrypted rendition of the electronic document is available at the user location;
wherein, if it is determined that the encrypted rendition is available at the user location, requesting access includes instructions to:

extract from the encrypted rendition a reference to the document repository where one or more renditions of the electronic document are stored; and

request access to the rendition from the document repository identified by the extracted reference.

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43.　The computer program product of claim 42, wherein:

the encrypted rendition includes a document identifier and the reference to the document repository includes a path for accessing the document repository over a computer network; and

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the instructions to request access include instructions to:

retrieve the document identifier and the path from the encrypted rendition; and

send an access request to the document repository specified by the retrieved path, the access request including the document identifier.

15　44.　The computer program product of claim 41, wherein:

the electronic voucher further includes a set of access policies for the electronic document.

45.　The computer program product of claim 44, wherein the set of access policies include

20　information indicating that a user at the user location is authorized to perform one or more of the following operations:

adding content to the electronic document, adding comments to the electronic document, applying a digital signature to the electronic document, saving the electronic document, printing the electronic document, importing form data into the electronic

25　document, exporting form data from the electronic document, and transmitting the electronic document to another user.

46.　The computer program product of claim 44, further comprising instructions to:

verify, at the user location, that one or more requested operations are allowed by the

30　set of access policies for the electronic document.

47.   The computer program product of claim 44, wherein:

the set of access policies is a set of access policies that resides in the document repository and specifies access rights to the electronic document.

5   48.   The computer program product of claim 41, wherein:

the electronic voucher further includes a set of application rights, the application rights being operable to enable one or more disabled operations in an electronic document software application at the user location.

10   49.   The computer program product of claim 41, wherein the rendition is a Portable Document Format document.

50.   The computer program product of claim 41, further comprising instructions to:

store the received voucher at the user location.

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51.   The computer program product of claim 41, wherein the instructions to receive an electronic voucher comprise instructions to:

determine whether an electronic voucher is stored locally at the user location; and

if the electronic voucher is stored locally, retrieving the electronic voucher from the

20   local storage;

if the electronic voucher is not stored locally, request an electronic voucher from the document management system.

52.   The computer program product of claim 41, further comprising instructions to:

25   receive an encrypted rendition of the electronic document.

53.   The computer program product of claim 41, wherein:

the voucher includes expiration information including one or more of: a predetermined number of access operations before the voucher expires, a particular time

30   period before the voucher expires, and a particular time when the voucher expires.

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54.   A computer program product, tangibly stored on a computer-readable medium, for controlling access to an electronic document, comprising instructions operable to cause a programmable processor to:

      receive at a document management system a request from a user for access to an electronic document at a user location, a rendition of the electronic document being stored in a document repository in the document management system;

      authenticate the user at the document management system, to verify that the user is authorized to access the electronic document; and

      if the user is authorized to access the electronic document,

      create, at the document management system, an encrypted rendition using the rendition that is stored in the document repository;

      create, at the document management system, a voucher including an electronic key operable to decrypt an encrypted rendition of the electronic document; and

      pass the electronic voucher to the user location.